An object weighing 1700 kg travels at a speed of 5m/s and hits another object weighing 1000 kg that is at rest. After the collision, the first object slows to 3.75 m/s. How fast does the second object go after the collision?

first, find your knowns. m1= 1700 m2=1000 v1=5 v2=0 before the collision. After, m1 and m2 are the same, because both objects mass hasn't changed. After the collision, the knowns are v1=3.75 and v2= x because you are trying to figure out the velocity of v2 after the collision. the equation would be: m1v1+m2v2=m1v1+m2v2 because the objects don't stay together after the equation. plug in the values like so (i'm using . for multiplication)-

1700 . 5+1000 . 0= 1700 . 3.75+ 1000x    now simplify

8500+0= 6375+ 1000x

8500= 7375x

x= 1.152  \*never round, speeds should be exact to hundredth decimal place